

What Is Claimed Is:

1. An apparatus for detecting a rollover event, having at least one first acceleration sensor (3, 9) in the vertical direction of the vehicle and having at least one second acceleration sensor (1, 2) in at least one horizontal direction of the vehicle, wherein a processor (4, 10, 11) is embodied such that the processor (4, 10, 11) detects an inertial event (13) as a function of a first signal of the at least one second acceleration sensor (1, 2), and after detection of the inertial event (13) evaluates a second signal from the at least one first acceleration sensor (3, 9) for detecting the rollover event and triggers restraint devices (6, 16) as a function thereof.

2. The apparatus as recited in Claim 1, wherein the processor (4, 10, 11) detects the inertial event (13) in the form of the deployment of restraint devices (6, 16) in the event of a head-on crash or a lateral crash or as a function of an acceleration signal in the longitudinal direction of the vehicle or the transverse direction of the vehicle.

3. The apparatus as recited in Claim 1 or 2, wherein the processor (4, 10, 11) performs the evaluation by the examination of characteristics, in that the acceleration in the vertical direction of the vehicle in the inertial event (13) is negative and has a positive gradient.

4. The apparatus as recited in Claim 3, wherein the processor (4, 10, 11) is embodied such that in addition it evaluates the acceleration in the transverse direction of the vehicle and/or a rotation rate about the vehicle longitudinal rate, in order to detect a lateral motion.

5. The apparatus as recited in Claims 3 and 4, wherein the processor (4, 10, 11) is embodied such that it evaluates the vehicle acceleration in the longitudinal direction of the vehicle.

6. The apparatus as recited in one of the preceding claims, wherein the apparatus includes a low-pass filter (10, 11) for filtering the acceleration in the vertical direction of the vehicle, in order to extract the gravitational acceleration.

7. The apparatus as recited in Claim 6,  
wherein the acceleration sensor (3, 9) in the vertical direction of the vehicle includes an offset control which is embodied as slow.

8. The apparatus as recited in one of the preceding claims,  
wherein the processor (4, 10, 11) is embodied such that in the absence of detection of a rollover event, after a first inertial event (13), monitoring for a new inertial event is possible.

9. The apparatus as recited in one of the preceding claims,  
wherein plausibility sensors (7, 8) are provided.